

AMENDMENT

In the Claims:

Please amend claims 1, 4, 5, 11, and 12, cancel claim 15, without prejudice or disclaimer, and add new claims 16-33 as follows:

1. (Amended) A purified polynucleotide that comprises a polynucleotide [or fragment thereof derived from a LS147 gene, wherein said polynucleotide is capable of selectively hybridizing] that specifically binds to [the nucleic acid of said LS147 gene and has at least 50% identity to] a polynucleotide sequence selected from the group consisting of [(a)] SEQUENCE ID NO 1, SEQUENCE ID NO 2, and SEQUENCE ID NO 3[, SEQUENCE ID NO 5, SEQUENCE ID NO 6, SEQUENCE ID NO 7], and complements thereof[, and (b) fragments of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, and SEQUENCE ID NO 4.]

4. (Amended) The purified polynucleotide of claim 1, wherein said polynucleotide comprises a sequence encoding at least one [LS147] epitope.

5. (Amended) A recombinant expression system for use in a desired host comprising a nucleic acid sequence that [includes] encodes an open reading frame of at least 5 amino acids, said nucleic acid sequence derived from a polynucleotide selected from the group consisting of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, and nucleotides 51-284 of SEQUENCE ID NO 7, wherein said open reading frame is [LS147] operably linked to a control sequence compatible with [a] the desired host[, wherein said nucleic acid sequence has at least 50% identity with a sequence selected from the group consisting of SEQUENCE ID NOS 1-7, and fragments or complements thereof].

11. (Amended) A cell transfected with a nucleic acid sequence encoding at least

one [LS147] epitope, wherein said nucleic acid sequence is selected from the group consisting of [SEQUENCE ID NOS 1-7, and fragments or complements thereof] SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, fragments comprising at least about 10 nucleotides of any of SEQUENCE ID NOS 1, 2, 3, and complements thereof.

12. (Amended) A composition of matter comprising a [LS147] purified polynucleotide [or fragment thereof, wherein said] that specifically binds to a polynucleotide [has at least 50% identity with a polynucleotide] selected from the group consisting of [(a)] SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3[, SEQUENCE ID NO 5, SEQUENCE ID NO 6, SEQUENCE ID NO 7,] and complements thereof[, and (b) fragments of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, and SEQUENCE ID NO 4].

--16. The recombinant expression system of claim 5, wherein said open reading frame is at least 8 amino acids.

17. The recombinant expression system of claim 5, wherein said open reading frame is at least 10 amino acids.

18. The recombinant expression system of claim 5, wherein said open reading frame is at least 15 amino acids.

19. A cell transfected with a nucleic acid sequence encoding at least one epitope wherein the epitope consists of at least 5 amino acids encoded by nucleotides 51-284 of SEQUENCE ID NO 7.

20. The cell of claim 19, wherein said epitope consists of at least 8 amino acids.

21. The cell of claim 19, wherein said epitope consists of at least 10 amino acids.
22. The purified polynucleotide of claim 1, wherein said polynucleotide comprises a fragment of at least about 10 nucleotides.
23. The purified polynucleotide of claim 1, wherein said polynucleotide comprises a fragment of at least about 12 nucleotides.
24. The purified polynucleotide of claim 1, wherein said polynucleotide comprises a fragment of at least about 15 nucleotides.
25. The purified polynucleotide of claim 1, wherein said polynucleotide comprises a fragment of at least about 20 nucleotides.
26. A purified polynucleotide consisting of nucleotides 51-284 of SEQUENCE ID NO 7.
27. A purified polynucleotide encoding at least one epitope wherein the epitope consists of at least 5 amino acids encoded by nucleotides 51-284 of SEQUENCE ID NO 7.
28. The purified polynucleotide of claim 27, wherein said epitope is at least 8 amino acids.
29. The purified polynucleotide of claim 27, wherein said epitope is at least 10 amino acids.
30. The composition of matter of claim 12, wherein said polynucleotide